

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006833**Date Inspected:** 20-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Zhi Cheng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG superstructure trial assembly east line

This QA observed ZPMC qualified welding personnel identified as 220063 perform FCAW welding on weld joint identified as SSD27-PP014-021. ZPMC QC identified as Mr. Zhang Zhen Mao was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2133.

This QA observed ZPMC qualified welding personnel identified as 220067 perform FCAW welding on weld joint identified as SSD27-PP015-092. ZPMC QC identified as Mr. Zhang Zhen Mao was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2133.

This QA observed ZPMC qualified welding personnel identified as 202841 perform FCAW welding on weld joint identified as SSD27-PP016-166. ZPMC QC identified as Mr. Zhang Zhen Mao was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2133.

During random Visual Testing (VT) of weld joint fit up on OBG segment 2AE this QA observed excessive root openings on weld joints identified as SSD27-PP016-137 and SSD27-PP015-100. The root opening on

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SSD27-PP016-137 measured 11mm to 13mm and SSD27-PP015-100 measured 5mm to 9mm. This QA informed ZPMC QC CWI identified as Mr. Wu Zhi Cheng and ABF QA inspector identified as Mr. Kevin Chen of this issue. Mr Wu told this QA that ZPMC would submit a Weld Repair Report (WRR) to correct the root openings prior to welding these joints.

This QA along with Caltrans QA Mr. Dhanasingh Sukanthan randomly laid out 200mm areas at the segment splice between 2AE and 2BE for Radiographic Testing (RT). QA laid out one area on each of the corner assembly edge plates, three areas on the bottom panels and 7 areas on the deck panels. This was performed at the request of ZPMC QA identified as Mr. Wang Lu.

OBG superstructure trial assembly west line

This QA observed ZPMC welding personnel identified as 048617 perform SMAW welding on SPCM material while the material was wet. The weld joints are identified as CA099-001(segment 2AW) and CA101-001 (segment 2BW). See attached photos. This issue is non compliant to AWS D1.5 2002 section 3, paragraph 3.1.3 "Welding shall not be done when the surfaces are wet or exposed to rain and section 3, paragraph 3.2.1 "Surfaces to be welded and surfaces adjacent to a weld shall also be free from moisture that would prevent proper welding. This QA informed ZPMC QC CWI identified as Mr. Wu Zhi Cheng and ABF representative Mr. Peter Ferguson that an incident report would be generated for this issue.

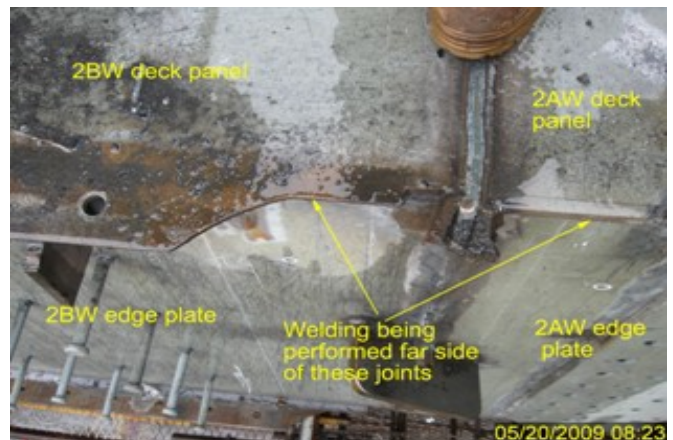
OBG crossbeam CB2 (in superstructure trial assembly)

This QA observed ZPMC personnel drilling bolt holes at the splice joint to the OBG west line. No other significant work was observed during the time this QA was present.

OBG crossbeam CB3 (in superstructure trial assembly)

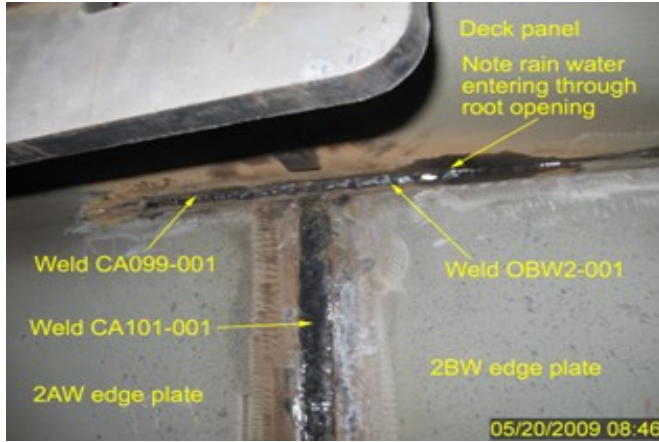
This QA observed ZPMC personnel installing the bottom panel splice plates to the east and west lines. No other significant work was observed during the time this QA was present.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



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Summary of Conversations:

As mentioned above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (15000422372), who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Prue,Erik	QA Reviewer
